



EXTREMELY LOW BIRTH WEIGHT INFANTS TREATED EARLY WITH A LOW DOSE OF HYDROCORTISONE FOUND TO HAVE A GREATER CHANCE OF SURVIVING WITHOUT CHRONIC LUNG DISEASE

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Findings from a Health Resources and Services Administration's Maternal and Child Health Bureau-funded pilot study support the early administration of a low dose of hydrocortisone (an anti-inflammatory drug) to very low birth weight infants as a way to increase their chances of survival without chronic lung disease (CLD).

The pilot study main findings are reported in an article entitled "Prophylaxis Against Early Adrenal Insufficiency to Prevent Chronic Lung Disease in Premature Infants" which appears in the December 1999 issue of Pediatrics (Vol. 104, and No. 6,pp1258-1263). This two-center, randomized, double-masked, controlled pilot study was designed to provide a preliminary assessment of treatment efficacy and safety and to estimate the sample size needed for a much larger multi-center clinical trial.

Overall, the study findings indicate that early hydrocortisone therapy significantly improved the chances of survival without oxygen dependence at 36 weeks of postconceptional age in very low premature infants. The beneficial effects of hydrocortisone therapy were seen in the two study centers and was more pronounced in infants whose mothers had experienced a condition called chorioamnionitis, a prenatal inflammation of the embryonic sac in and through which the baby develops and is nourished. In this latter group, the hydrocortisone treatment was associated not only with better respiratory outcome, but also improved early feeding and increased weight at 36 weeks of postconceptional age. The investigators conclude that the pilot study findings justify a larger multi-center randomized trial to test the benefits and assess the risks of low-dose hydrocortisone therapy to prevent chronic lung disease in extremely premature infants.

Chronic lung disease develops frequently in small premature infants and results in increased health care costs, prolonged hospital stay with frequent hospitalization, and possible harmful effects on future growth and development. Many factors contribute to chronic lung disease in very low birth weight infants such as: (1) oxygen therapy; (2) prenatal inflammation; (3) trauma resulting from the process of intubation; (4) and trauma resulting from prolonged use of feeding tube. Many treatments other than early administration of low-dose hydrocortisone have been tried with few successes and/or without significant harmful effects.